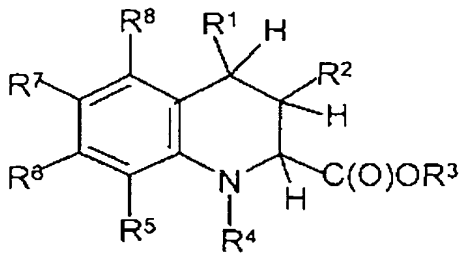
What is claimed is

1. A substituted 1,2,3,4-tetrahydroquinoline-2-carboxylic acid compound corresponding to formula I:



I,

wherein

R1 and **R2** together form the following, each of which is monosubstituted or polysubstituted or unsubstituted:

$-(CH_2)_n-$, where n = 3-10

$-CH=CH-CH_2-$, $-CH_2-CH=CH-$,

$-CH=CH-CH_2-CH_2-$, $-CH_2-CH_2-CH=CH-$,

$-CH_2-CH=CH-CH_2-$,

$-CH_2-CH=CH-CH_2-CH_2-$, $-CH_2-CH_2-CH=CH-CH_2-$,

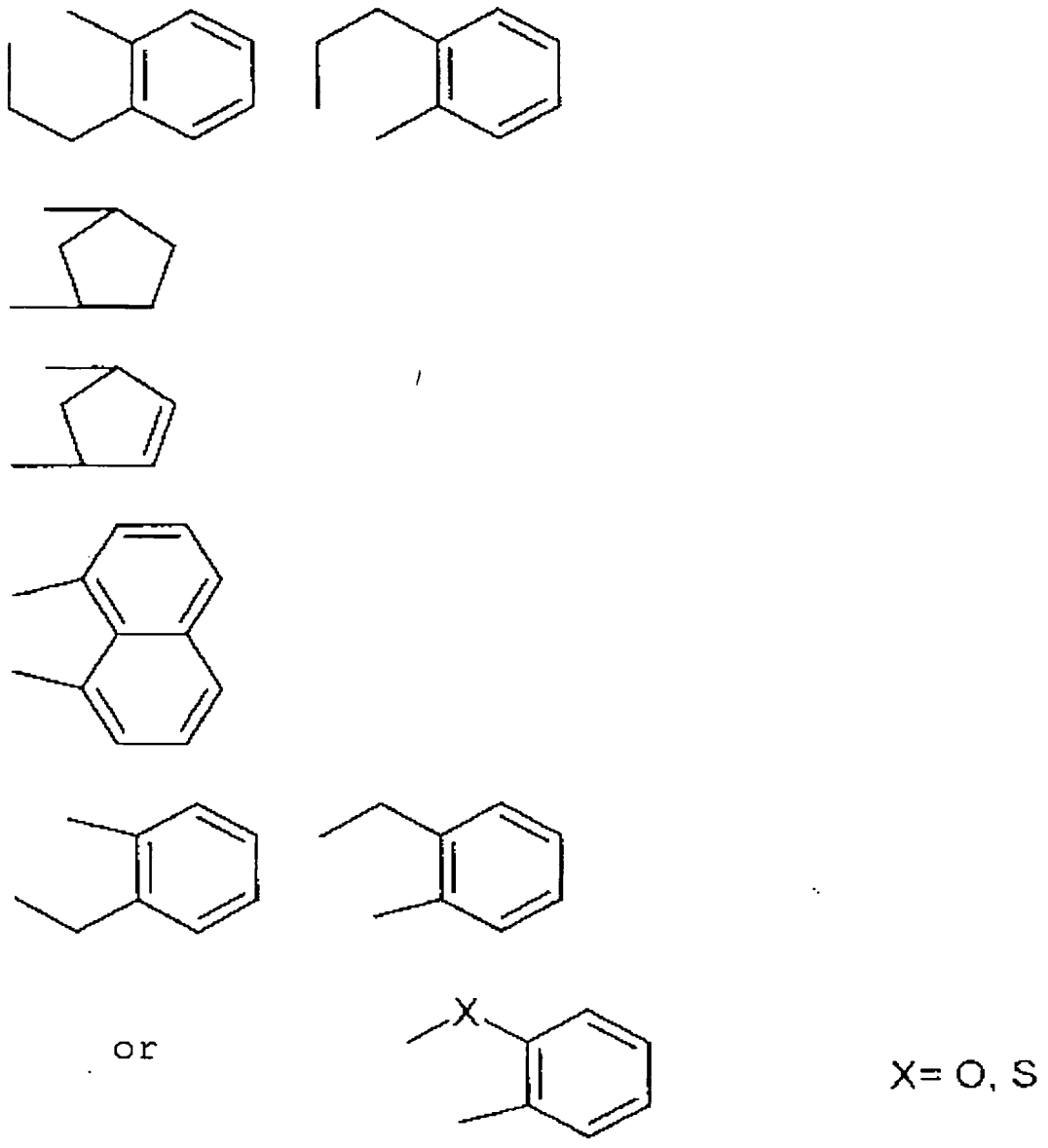
$-CH_2-CH_2-CH=CH-CH_2-CH_2-$,

$-O-CH_2-CH_2-$, $-CH_2-CH_2-O-$,

$-O-CH_2-CH_2-CH_2-$, $-CH_2-CH_2-CH_2-O-$,

$-CH_2-O-CH_2-$,

$-CH_2-CH_2-O-CH_2-$, $-CH_2-O-CH_2-CH_2-$,



R^3 represents

H; C_1-C_{18}-alkyl, C_2-C_{18}-alkenyl or C_2-C_{18}-alkynyl, each of which is branched or unbranched and monosubstituted or polysubstituted or unsubstituted; C_3-C_8-cycloalkyl which is saturated or unsaturated and monosubstituted or polysubstituted or unsubstituted, or a corresponding heterocycle in which at least one ring C atom is replaced by N, S or O;

alkylaryl or alkylheteroaryl, each of which is monosubstituted or polysubstituted or unsubstituted; and aryl or heteroaryl, each of which is monosubstituted or polysubstituted or unsubstituted;

R^4 represents

R^{4a} or ZR^{4a}, where Z = C_1-C_6-alkyl, C_2-C_6-alkenyl or C_2-C_6-alkynyl, each of which is branched or unbranched and monosubstituted or polysubstituted or unsubstituted; and R^{4a} represents

H; C_1-C_{12}-alkyl, C_2-C_{12}-alkenyl or C_2-C_{12}-alkynyl, each of which is branched or unbranched and monosubstituted or polysubstituted or unsubstituted; C_3-C_8-cycloalkyl which is saturated or unsaturated and monosubstituted or polysubstituted or unsubstituted, or a corresponding heterocycle in which at least one ring C atom is replaced by S, O or N; and aryl or heteroaryl, each of which is monosubstituted or polysubstituted or unsubstituted;

$C(O)R^9$, $C(O)OR^9$, $C(S)R^9$, $C(S)OR^9$ or $S(O_2)R^9$, where R^9 represents

H; C_1-C_{10}-alkyl, C_2-C_{10}-alkenyl or C_2-C_{10}-alkynyl, each of which is branched or unbranched and monosubstituted or polysubstituted or unsubstituted; C_3-C_8-cycloalkyl which is saturated or unsaturated and monosubstituted or polysubstituted or unsubstituted, or a corresponding heterocycle in which at least one ring C atom is replaced by S, O or N; alkylaryl or alkylheteroaryl, each of which is monosubstituted or polysubstituted or unsubstituted; and aryl or heteroaryl, each of which is monosubstituted or polysubstituted or unsubstituted, especially phenethyl, 1-adamantyl, 2-adamantyl, 1-naphthyl or 2-naphthyl, 2-, 3- or 4-pyridyl or thiazolyl;

SR^{10}, where R^{10} represents

aryl or heteroaryl, each of which is monosubstituted or polysubstituted or unsubstituted;

$C(O)NR^{11}R^{12}$, $C(O)NR^{11}NR^{12}R^{13}$, $C(NR^{11})NR^{12}R^{13}$, $C(S)NR^{11}R^{12}$ or $C(S)NR^{11}NR^{12}R^{13}$, where R^{11}, R^{12} and R^{13} independently represent

H; C_1-C_{18}-alkyl, C_2-C_{18}-alkenyl or C_2-C_{18}-alkynyl, each of which is branched or unbranched and monosubstituted or polysubstituted or unsubstituted; C_3-C_8-cycloalkyl which is saturated or unsaturated and monosubstituted or polysubstituted or unsubstituted, or a corresponding heterocycle in which at least one ring C atom is replaced by S, O or N; alkylaryl or alkylheteroaryl, each of which is monosubstituted or polysubstituted or unsubstituted; and aryl or heteroaryl, each of which is monosubstituted or polysubstituted or unsubstituted;

R^5, R^6, R^7 and **R^8** independently represent

H; F; Cl; Br; I; CN; NO_2; and C_1-C_{10}-alkyl, C_2-C_{10}-alkenyl or C_2-C_{10}-alkynyl, each of which is branched or unbranched and monosubstituted or polysubstituted or unsubstituted;

OR^{14}, $OC(O)R^{14}$, $OC(S)R^{14}$, $C(O)R^{14}$, $C(O)OR^{14}$, $C(S)R^{14}$, $C(S)OR^{14}$, SR^{14}, $S(O)R^{14}$ or $S(O_2)R^{14}$, where R^{14} represents

H; C_1-C_{10}-alkyl, C_2-C_{10}-alkenyl or C_2-C_{10}-alkynyl, each of which is branched or unbranched and monosubstituted or polysubstituted or unsubstituted; C_3-C_8-cycloalkyl which is saturated or unsaturated and monosubstituted or polysubstituted or unsubstituted, or a corresponding heterocycle in which at least one ring C atom is replaced by S, O or N; alkylaryl or alkylheteroaryl, each of which is monosubstituted or polysubstituted or unsubstituted; and aryl or heteroaryl, each of which is monosubstituted or polysubstituted or

unsubstituted;

$NR^{15}R^{16}$, $NR^{15}C(O)R^{16}$, $C(NR^{15})NR^{16}R^{17}$, $NR^{15}C(S)R^{16}$, $C(S)NR^{15}R^{16}$, $C(S)NR^{15}NR^{16}R^{17}$ or $S(O_2)NR^{15}R^{16}$, where R^{15}, R^{16} and R^{17} independently represent

H; O; C_1-C_{18}-alkyl, C_2-C_{18}-alkenyl or C_2-C_{18}-alkynyl, each of which is branched or unbranched and monosubstituted or polysubstituted or unsubstituted; C_3-C_8-cycloalkyl which is saturated or unsaturated and monosubstituted or polysubstituted or unsubstituted, or a corresponding heterocycle in which at least one ring C atom is replaced by S, O or N; alkylaryl or alkylheteroaryl, each of which is monosubstituted or polysubstituted or unsubstituted; and aryl or heteroaryl, each of which is monosubstituted or polysubstituted or unsubstituted;

or

R^{15} and R^{16} or R^{16} and R^{17} together form a C_3-C_8-cycloalkyl which is saturated or unsaturated and monosubstituted or polysubstituted or unsubstituted, or a corresponding heterocycle in which at least one ring C atom is replaced by S, O or N; and

R^5 and **R^6**, **R^6** and **R^7** or **R^7** and **R^8** together form

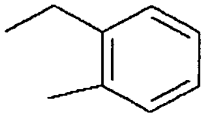
$=CR^{18}$-CH=CH-CH= or =CH-CR^{18}=CH-CH=, where R^{18} represents

H; F; Cl; Br; I; OH; and C_1-C_{10}-alkyl, C_2-C_{10}-alkenyl or C_2-C_{10}-alkynyl, each of which is branched or unbranched and monosubstituted or polysubstituted or unsubstituted,

in the form of a salt thereof with a physiologically acceptable acid or in the form of a salt thereof with a base,

provided that

if R^1 and R^2 together form -CH=CH-CH_2- or

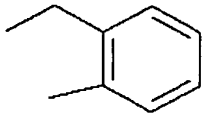


and R^3 is (-)-p-menthan-3-ol, $R^7 \neq Cl$ and R^5, R^6 and $R^8 \neq H$ simultaneously,

if R^1 and R^2 together form $-CH=CH-CH_2-$ and R^3 is CH_3, $R^7 \neq H$, Cl or OCH_3 and R^5, R^6 and $R^8 \neq H$ simultaneously,

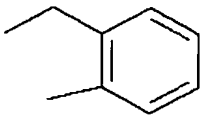
if R^{1b} and R^{2a} together form $-CH=CH-CH_2-$ and R^3 is H, $R^7 \neq OCH_3$ or $C(O)NH_2$ and R^5, R^6 and $R^8 \neq H$, R^5 and $R^7 \neq CH_3$ and R^6 and $R^8 \neq H$, or $R^5 \neq OCH_3$ and R^6, R^7 and $R^8 \neq H$ simultaneously, or

if R^{1b} and R^{2a} together form



or $-O-CH_2-CH_2-$ and R^3 is C_2H_5, $R^7 \neq H$, Cl, CH_3, OCH_3 or NO_2 and R^5, R^6 and $R^8 \neq H$, or $R^5 \neq NO_2$ and R^6, R^7 and $R^8 \neq H$ simultaneously.

2. The compound of claim 1, wherein if R^1 and R^2 together form $-CH=CH-CH_2-$ or



and R^3 is menthol or borneol, $R^7 \neq Cl$ and R^5, R^6 and $R^8 \neq H$ simultaneously.

3. The compound of claim 1, wherein said compound is present in the form of a pure enantiomer.

4. The compound of claim 1, wherein said compound is present in the form of

a pure diastereoisomer.

5. The compound of claim 1, wherein said compound is present in the form of a mixture of stereoisomers.

6. The compound of claim 1, wherein said compound is present in the form of a racemic mixture.

7. The compound of claim 1, wherein said compound is present in the form of an NH_4^+, monopotassium, dipotassium, magnesium or calcium salt.

8. The compound of claim 1, wherein said compound is present in the form of an NH_4^+ salt.

9. The compound of claim 1, wherein R^4 represents

H; C_1-C_{10}-alkyl, C_2-C_{10}-alkenyl or C_2-C_{10}-alkynyl, each of which is branched or unbranched and monosubstituted or polysubstituted or unsubstituted; and C_3-C_8-cycloalkyl which is saturated or unsaturated and monosubstituted or polysubstituted or unsubstituted; and

$C(O)R^9$, where R^9 represents

H; C_1-C_{10}-alkyl, C_2-C_{10}-alkenyl or C_2-C_{10}-alkynyl, each of which is branched or unbranched and monosubstituted or polysubstituted or unsubstituted; C_3-C_8-cycloalkyl which is saturated or unsaturated and monosubstituted or polysubstituted or unsubstituted; and aryl or heteroaryl, each of which is monosubstituted or polysubstituted or unsubstituted,

10. The compound of claim 1, wherein R^4 represents

$C(O)R^9$, where R^9 represents phenethyl, 1-adamantyl, 2-adamantyl, 1-naphthyl or 2-naphthyl, 2-, 3- or 4-pyridyl or thiazolyl.

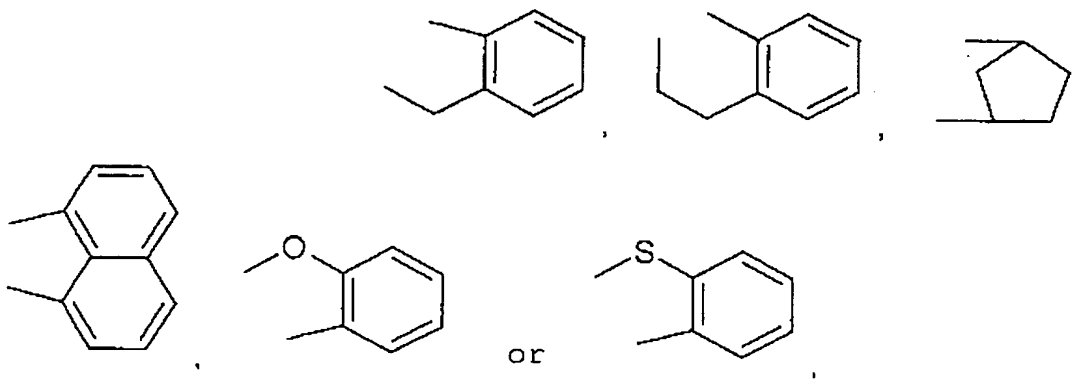
11. The compound of claim 1, wherein R^4 represents
H, CH_3 or C_2H_5.

12. The compound of claim 1, wherein R^3 represents
H; C_1-C_{10}-alkyl, C_2-C_{10}-alkenyl or C_2-C_{10}-alkynyl, each of which is branched or unbranched and monosubstituted or polysubstituted or unsubstituted; C_3-C_8-cycloalkyl which is saturated or unsaturated and monosubstituted or polysubstituted or unsubstituted, or a corresponding heterocycle in which at least one ring C atom is replaced by N or O; alkylaryl which is monosubstituted or polysubstituted or unsubstituted; and aryl or heteroaryl, each of which is monosubstituted or polysubstituted or unsubstituted.

13. The compound of claim 1, wherein R^3 represents
H; C_1-C_4-alkyl which is branched or unbranched and monosubstituted or polysubstituted or unsubstituted; and phenyl, benzyl or phenethyl which is monosubstituted or polysubstituted or unsubstituted.

14. The compound of claim 1, wherein R^3 represents
H, CH_3 or C_2H_5.

15. The compound of claim 1, wherein R^1 and R^2 together form
$-O-CH_2-CH_2-$, $(-CH_2-)_n$ where n = 3-6, $-CH=CH-CH_2-$, $-CH=CH-CH_2-CH_2-$,



16. The compound of claim 1, wherein R^1 and R^2 together form $(-CH_2-)_n$ where n = preferably 3 or 6, -CH=CH-CH_2- or -CH=CH-CH_2-CH_2-.

17. The compound of claim 1, wherein R^5, R^6, R^7 and R^8 independently represent

H; F; Cl; Br; I; CN; NO_2; and C_1-C_{10}-alkyl, C_2-C_{10}-alkenyl or C_2-C_{10}-alkynyl, each of which is branched or unbranched and monosubstituted or polysubstituted or unsubstituted;

OR^{14}, $C(O)R^{14}$, $C(O)OR^{14}$ or SR^{14}; and

$NR^{15}R^{16}$ or $NR^{15}C(O)R^{16}$, R^{15} and R^{16} independently represent

H; O; C_1-C_{10}-alkyl, C_2-C_{10}-alkenyl or C_2-C_{10}-alkynyl, each of which is branched or unbranched and monosubstituted or polysubstituted or unsubstituted.

18. The compound of claim 1, wherein R^5, R^6, R^7 and R^8 independently represent

H; F; Cl; Br; I; CN; NO_2; and C_1-C_6-alkyl, C_2-C_6-alkenyl or C_2-C_6-alkynyl, each of which is branched or unbranched and monosubstituted or polysubstituted or unsubstituted;

OR^{14}, $C(O)R^{14}$, $C(O)OR^{14}$ or SR^{14}, where R^{14} represents

H; C_1-C_4-alkyl which is branched or unbranched and monosubstituted or polysubstituted or unsubstituted; and aryl which is monosubstituted or polysubstituted or unsubstituted.

19. The compound of claim 1, wherein R^5, R^6, R^7 and R^8 independently represent

H; F; Cl; Br; I; CN; and C_1-C_4-alkyl which is branched or unbranched and monosubstituted or polysubstituted or unsubstituted;

OR^{14} or SR^{14}, where R^{14} represents

C_1-C_4-alkyl which is branched or unbranched and monosubstituted or polysubstituted or unsubstituted; and aryl which is monosubstituted or polysubstituted or unsubstituted.

20. The compound of claim 1, wherein R^5, R^6, R^7 and R^8 independently represent

H; F; Cl; Br; I; CN; CH_3; CF_3; t-butyl; i-butyl; -OCH_3; -OCF_3; -SCH_3 or -O-phenyl.

21. The compound of claim 1, wherein R^5, R^6, R^7 and R^8 independently represent

H; F; Cl; Br; I; CN; NO_2; CF_3; and C_1-C_6-alkyl, C_2-C_6-alkenyl or C_2-C_6-alkynyl, each of which is branched or unbranched and unsubstituted;

OR^{14}, $C(O)R^{14}$, $C(O)OR^{14}$ or SR^{14}, where R^{14} represents

H; C_1-C_4-alkyl which is branched or unbranched and monosubstituted or polysubstituted or unsubstituted; and aryl which is monosubstituted or polysubstituted or unsubstituted.

22. The compound of claim 1, wherein R^5, R^6, R^7 and R^8 independently

represent

H; F; Cl; Br; I; CN; CF_3; and C_1-C_4-alkyl which is branched or unbranched and unsubstituted;

OR^{14} or SR^{14}, where R^{14} represents

C_1-C_4-alkyl which is branched or unbranched and monosubstituted or polysubstituted or unsubstituted; and aryl which is monosubstituted or polysubstituted or unsubstituted.

23. The compound of claim 1, wherein R^5, R^6, R^7 and R^8 independently represent

H; F; Cl; Br; I; CN; CH_3; CF_3; t-butyl; i-butyl; -OCH_3; -OCF_3; -SCH_3 or -O-phenyl.

24. The compound of claim 1, wherein

R^5, R^6 and R^8 are H and R^7 is Cl, or

R^5 and R^7 are H and R^6 and R^8 are Cl.

25. The compound of claim 1, wherein said compound is selected from the group consisting of the salts of:

7,9-dichloro-3a,4,5,9b-tetrahydro-3H-cyclopenta[c]quinoline-4-carboxylic acid,

8-chloro-3a,4,5,9b-tetrahydro-3H-cyclopenta[c]quinoline-4-carboxylic acid,

6,8,9-trichloro-2,3,3a,4,5,9b-hexahydrofuro[3,2-c]quinoline-4-carboxylic acid,

1,3-dichloro-5,6,6a,7,8,12b-hexahydrobenzo[k]phenanthridine-6-carboxylic acid,

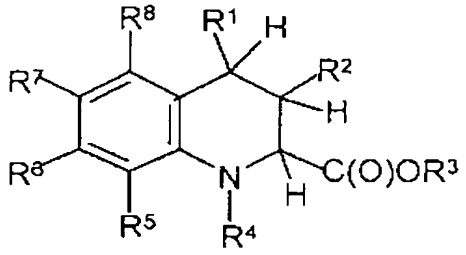
1,3-dichloro-5,6a,7,11b-tetrahydro-6H-indeno[2,1-c]quinoline-6-carboxylic acid and

7,9-dichloro-2,3,3a,4,5,9b-hexahydro-1H-cyclopenta[c]quinoline-4-carboxylic acid.

26. The compound of claim 1, wherein said compound is selected from the

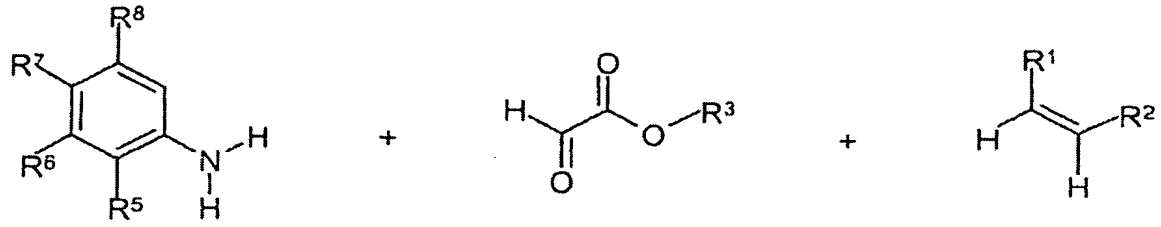
group consisting of the salts of:
sodium 7,9-dichloro-3a,4,5,9b-tetrahydro-3H-cyclopenta[c]quinoline-4-carboxylate or
sodium 7,9-dichloro-2,3,3a,4,5,9b-hexahydro-1H-cyclopenta[c]quinoline-4-carboxylate.

27. A process for producing a substituted 1,2,3,4-tetrahydroquinoline-2-carboxylic acid compound corresponding to formula I of claim 1, wherein R^4 = H,



I,

comprising the steps of:
reacting an aniline corresponding to formula II, a glyoxalic acid ester or a glyoxalic acid corresponding to formula III and an olefin of formula IV, with trifluoroacetic acid.



II III IV

28. The process of claim 27, wherein said step of reacting is carried out at a

temperature between 0°C and 100°C.

29. The process of claim 27, wherein at least one of R^1, R^2 and R^3 are independently provided with a protective group.

30. The process of claim 27, further comprising the step of saponifying any ester groups existing when the reacting step has ended or bringing the product formed when the reacting step has ended into contact with a strong base, which strong base may already contain the desired cation, in order to form a salt.

31. The process of claim 27, wherein the duration of the reaction is 0.25 - 12 hours.

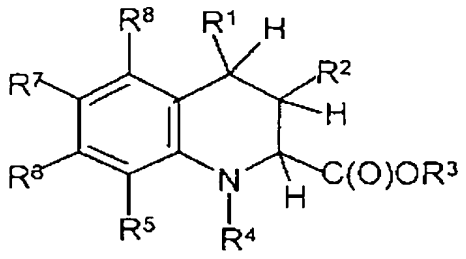
32. The process of claim 27, wherein the duration of the reaction is no longer than 2 hours.

33. The process of claim 27, wherein the reaction is carried out at a temperature of between 20°C and 40°C.

34. The process of claim 27, wherein the reaction is carried out at room temperature.

35. The process of claim 27, wherein the reaction is a single-vessel reaction.

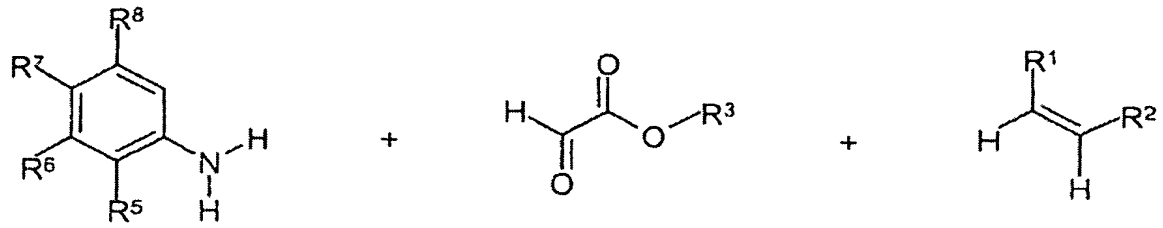
36. A process for producing a substituted 1,2,3,4-tetrahydroquinoline-2-carboxylic acid compound corresponding to formula I of claim 1, wherein $R^4 \neq H$,



I,

comprising the steps of:

reacting an aniline corresponding to formula II, a glyoxalic acid ester or a glyoxalic acid corresponding to formula III and an olefin of formula IV, with trifluoroacetic acid to form a reaction product wherein $R^4 = H$



II III IV

reacting said reaction product to substitute the H on R^4 with

R^{4a} or ZR^{4a}, where Z = C_1-C_6-alkyl, C_2-C_6-alkenyl or C_2-C_6-alkynyl, each of which is branched or unbranched and monosubstituted or polysubstituted or unsubstituted; and R^{4a} represents

C_1-C_{12}-alkyl, C_2-C_{12}-alkenyl or C_2-C_{12}-alkynyl, each of which is branched or unbranched and monosubstituted or polysubstituted or unsubstituted; C_3-C_8-cycloalkyl which is saturated or unsaturated and monosubstituted or polysubstituted or unsubstituted, or a corresponding heterocycle in which at least one ring C atom is replaced by S, O or N; and aryl or heteroaryl, each of which is

monosubstituted or polysubstituted or unsubstituted;

$C(O)R^9$, $C(O)OR^9$, $C(S)R^9$, $C(S)OR^9$ or $S(O_2)R^9$, where R^9 represents

H; C_1-C_{10}-alkyl, C_2-C_{10}-alkenyl or C_2-C_{10}-alkynyl, each of which is branched or unbranched and monosubstituted or polysubstituted or unsubstituted; C_3-C_8-cycloalkyl which is saturated or unsaturated and monosubstituted or polysubstituted or unsubstituted, or a corresponding heterocycle in which at least one ring C atom is replaced by S, O or N; alkylaryl or alkylheteroaryl, each of which is monosubstituted or polysubstituted or unsubstituted; and aryl or heteroaryl, each of which is monosubstituted or polysubstituted or unsubstituted, especially phenethyl, 1-adamantyl, 2-adamantyl, 1-naphthyl or 2-naphthyl, 2-, 3- or 4-pyridyl or thiazolyl;

SR^{10}, where R^{10} represents

aryl or heteroaryl, each of which is monosubstituted or polysubstituted or unsubstituted;

$C(O)NR^{11}R^{12}$, $C(O)NR^{11}NR^{12}R^{13}$, $C(NR^{11})NR^{12}R^{13}$, $C(S)NR^{11}R^{12}$ or $C(S)NR^{11}NR^{12}R^{13}$, where R^{11}, R^{12} and R^{13} independently represent

H; C_1-C_{18}-alkyl, C_2-C_{18}-alkenyl or C_2-C_{18}-alkynyl, each of which is branched or unbranched and monosubstituted or polysubstituted or unsubstituted; C_3-C_8-cycloalkyl which is saturated or unsaturated and monosubstituted or polysubstituted or unsubstituted, or a corresponding heterocycle in which at least one ring C atom is replaced by S, O or N; alkylaryl or alkylheteroaryl, each of which is monosubstituted or polysubstituted or unsubstituted; and aryl or heteroaryl, each of which is monosubstituted or

polysubstituted or unsubstituted.

37. The process of claim 25, wherein in at least one of the aniline corresponding to formula II, the glyoxalic acid ester or glyoxalic acid compound corresponding to formula III or the benzofuran corresponding to formula IV, are independently provided with a protective group, said protective group being selected from the group consisting of

$OSi(Ph)_2$tert-butyl to replace an OH group;

S-p-methoxybenzyl to replace an SH group and

NO_2 to replace an NH_2 group and

before a purification step,

at least one $OSi(Ph)_2$tert-butyl group is cleaved with tetrabutylammonium fluoride in tetrahydrofuran;

at least one p-methoxybenzyl group is cleaved with a metal amide or

at least one NO_2 group is reduced to NH_2.

38. The process of claim 37, wherein said metal amide is sodium amide.

39. The process of claim 37, wherein, before a purification step,

all $OSi(Ph)_2$tert-butyl groups are cleaved with tetrabutylammonium fluoride in tetrahydrofuran;

all p-methoxybenzyl groups are cleaved with a metal amide or

all NO_2 groups are reduced to NH_2.

40. The process of claim 25, wherein a product of the process with at least one $C(O)OCH_3$ or $C(S)OCH_3$ group, or a product of the process wherein $R^3 = C_{1-4}$-alkyl, is saponified with KOH solution or NaOH solution in methanol or ethanol at a temperature of from 0°C - 100°C.

41. The process of claim 40, wherein said temperature is from 40°C - 60°C.

42. The process of claim 40, wherein in said product of the process, $R^3 = CH_3$ or C_2H_5.

43. A pharmaceutical composition, comprising:

at least one salt of a substituted 1,2,3,4-tetrahydroquinoline-2-carboxylic acid compound corresponding to formula I of claim 1 and

an auxiliary agent.

44. The pharmaceutical composition of claim 43, wherein said compound is present in the form of a pure enantiomer or pure diastereoisomer.

45. The pharmaceutical composition of claim 43, wherein said compound is present in the form of a mixture of stereoisomers.

46. The pharmaceutical composition of claim 43, wherein said compound is present in the form of a racemic mixture.

47. A method of alleviating pain in a mammal, said method comprising administering to said mammal an effective pain alleviating amount of a compound according to claim 1.

48. The method of claim 47, wherein said pain is neuropathic or chronic pain.

49. The method of claim 47, wherein said pain is pain from a migraine.

50. A method of treating urinary incontinence, pruritus, tinnitus aurium or diarrhea in a mammal, said method comprising administering to said mammal an effective amount of a compound according to claim 1.

51. A method of treating or inhibiting epilepsy, Parkinson's disease, Huntington's chorea, glaucoma, osteoporosis, ototoxicity, the withdrawal symptoms associated with alcohol or drug abuse, stroke, cerebral ischaemia, cerebral infarcts, cerebral oedema, hypoxia, anoxia or for anxiolysis or anaesthesia in a mammal, said method comprising administering to said mammal an effective amount of a compound according to claim 1.

52. A method of treating or inhibiting schizophrenia, Alzheimer's disease, psychosis due to increased amino acid levels, AIDS dementia, encephalomyelitis, Tourette's syndrome, perinatal asphyxia, inflammatory and allergic reactions, depression, drug or alcohol abuse, gastritis, diabetes, cardiovascular diseases, respiratory diseases, coughing or mental illnesses, said method comprising administering to said mammal an effective amount of a compound according to claim 1.